

Amateur Computer Group of New Jersey NEWS

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Dat-A-Whirl (Part Two)

Bob Hawes, ACGNJ



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Founded 1975

This is the second “half” of the article published in last month’s issue. As originally written, that article was over 10,000 words long. While I would have loved to print such a record-breaker, it just made more sense to split it in two. So that’s what I did. However, except for adding this opening paragraph and the Appendix at the end, I **don’t** intend to change **anything**. Thus, in the two places below where I mention my deadline, keep in mind that I was referring to the one for **last** month, **not** this month. (At this point in the article, I was **19** days away from said deadline). Three other reminders you might need: IFD means Image for DOS, IFL means Image for Linux, and the reason why I reviewed GFW 9 below is because that’s what I **had**. I couldn’t find a downloadable demo of the current version 15.

Stage One, Backup 5 of 7 (Ghost for Windows)

Taking the oldest program first, I installed GFW on my “stunt double” Windows XP boot hard disk. (It required that the Microsoft .NET Framework **also** be installed. Gritting my teeth, I did so). Then, I started it up. Under “Pick a backup task” in the “Norton Ghost 9.0” window that appeared, I selected “Back Up Drives”. That popped up the “Drive Backup Wizard” sub-window, which displayed a “Welcome” screen containing a lot of useless information. I just clicked on the “Next >” button. That took me to the “Drives to Back Up” screen, which displayed a complete list of my available drives. I chose I_DRIVE, then clicked on the “Next >” button again. That took me to the “Backup Location” screen, which displayed a suggested name for my backup. I clicked on the “Rename” button, then changed it to I_GFW_SRTEST1, entered “U:\” (the letter that I had assigned to my USB Expansion Drive) as my destination, and clicked on the “Next >” button yet again. That took me to the “Options” screen. I checked the “Divide” box, setting my maximum output file segment size to 2048 MB, **didn’t** check the “Verify”

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Webmaster	John Raff	(973) 992-9002

ACGNJ News

Editor

Barbara DeGroot
145 Gun Club Road
Palmerton PA 18071
Tel: (570) 606-3596
bdegroot@ptd.net

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E-Mail Addresses

Here are the e-mail addresses of ACGNJ Officers, Directors and SIG Leaders (and the Newsletter Editor). This list is also at (<http://www.acgnj.org/officers.html>).

Bruce Arnold	barnold@ieee.org
Jim Cooper	jim@thecoopers.org
Barbara DeGroot	bdegroot@ptd.net
Mark Douches	pcproblems@pobox.com
David Eisen	ultradave@gmail.com
Bill Farrell	wfarr18124@aol.com
Manuel Goyenechea	Goya@acgnjdotnetsig.org
Bob Hawes	bob.hawes@acgnj.org
Sol Libes	sol@libes.com
Malthi Masurekar	malthirm@verizon.net
Don McBride	don@mcbride.name
Gregg McCarthy	greggmajestic@gmail.com
David McRitchie	dmcritchie@hotmail.com
Andreas Meyer	lunics@acgnj.org
Arnold Milstein	mrflark@yahoo.com
John Raff	john@jraff.com
Mike Redlich	mike@redlich.net
Matt Skoda	som359@aol.com
Keith Sproul	ksproul@noc.rutgers.edu
Paul Syers	paul.syers@acgnj.org
Lenny Thomas	lenny.thomas@acgnj.org
Scott Vincent	scottvin@optonline.net
Frank Warren	kb4cyc@webwarren.com
Evan Williams	ewilliams@collaboron.com

box, accepted “Standard” (the default) as my “Compression” setting, and clicked on the “Next >” button yet again once more. That took me to the “Completing the Drive Backup Wizard” screen, where I could look over all of my selections. Then, I clicked on the “Next >” button one last time, and my backup **finally** started. It completed 39 minutes, 43 seconds later. Looking at my USB drive, I saw 20 sequentially named files: 19 measuring 2 GB each, and the last one measuring 1.8 GB, for a total of 39.8 GB.

GFW offers several ways to access its backup images. As above, in the “Norton Ghost 9.0” opening window, under “Pick a backup task”, I could select “Restore a Drive” instead, and then restore my backup image to an empty hard disk just as I did with those earlier programs. Or, I could use the Symantec Backup Image Browser (a separate program included with GFW) to view the contents of the image, and then extract as few or as many of its files as I wanted (or even **all** of them). Or, most convenient for my purposes here, I could mount my backup image as a virtual drive. So, in the left hand panel of Windows Explorer, I clicked on U: in the tree under “My Computer”, **right** clicked on I_GFW_SRTEST1.v2i (my image) in the right hand panel, and selected “Mount” from the menu that appeared. That, in turn, launched the “Mount V2i Drive” pop-up window. There, I selected a letter for my virtual drive (I chose V:), then I clicked on the “OK” button at the bottom. (Even though I accessed my backup image through

Windows Explorer, the mounting process **was**, in fact, really performed by the aforementioned Symantec Backup Image Browser; and furthermore, it did it in just **8** seconds flat). Going back to the left hand panel of Windows Explorer, I clicked on V: (which was now magically included in the tree under “My Computer”). Next, in the corresponding right hand panel, I located the MD5 file for I_DRIVE, and double-clicked on it. 1 hour, 4 minutes, 18 seconds later, MD5summer finished with **no** errors. How about that? I successfully tested my backup image **without** actually having to restore it first. What a great time saver! (For a few brief moments, I thought I’d discovered something that would be of actual value to **me**, personally. Then I experimented further, and found that this works only for some backups. GFW (at least this version) **can’t** mount its older *.GHO/GHS images as virtual drives. Naturally, **those** are the ones that I’ve got lots and lots of lying around).

A Windows user can supposedly back up his or her C: drive as described above, **while** Windows is still running; but restoring it is more complicated. The computer must be booted either from the program’s original installation CD, or from the “Symantec Recovery Disk” (which comes **only** with Norton System Works Premier). Happily for me, the objectives of this article **didn’t** require me to try that type of restoration. Having said that, I decided to try it anyway. So I shut down and pulled my Windows boot hard disk and my data hard disk. Then, I inserted my spare 80 GB target

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(totally unallocated), kept my USB drive connected, and booted from my original installation CD. I had to jump through a few hoops, but eventually, I was able to do it. My total restore time was 37 minutes, 47 seconds. My MD5 compare time was 32 minutes, 43 seconds, with no errors. With a product this far out of date, there’s no point in my giving any further details; but I can report that it is doable. The current product, having been upgraded six times since **my** version, can probably do it better. However, adding those restore and compare times yields a total of 1 hour, 10 minutes, 30 seconds. Barely **six** minutes longer than the virtual compare. I guess that “mount drive” feature might **not** be such a great time saver after all. Personally, I’d be leery of only being able to restore my C: drive from that one single CD. Otherwise, it looks OK. Too bad I can no longer bring myself to recommend **any** Windows product. Thus, having created my backup image; and having **twice** verified that it could be successfully restored if needed, I was now finished with GFW (hopefully, for good). So I uninstalled it from my XP system, and then installed ATI in its place.

Stage One, Backup 6 of 7 (Acronis True Image)

In the “Welcome” window that I got when I started ATI, I clicked on “Go to main screen”; and from there, I clicked on “Disk and partition backup”. That popped up a “Disk Backup” sub-window. There, under “What to back up”, I checked “J_DRIVE (J:)”, and I **unchecked** “Local Disk

(C:)”. “U:\My backups” was **already** typed in as my “Destination”. That **wasn’t** what I would have typed in myself, but I decided to accept it, as well as several other defaults that were listed there. (I **didn’t** see an option specifying a maximum file size). Then, I clicked on the “Back up now” button. A “time remaining” estimate of 37 minutes appeared, plus a slide bar indicating the backup’s progress; but **only** as a graphic element that slowly crept across the screen. There were **no** “percent completed” or “elapsed time” indicators. When it was done, I looked inside the newly created “My backups” directory on my USB drive, and saw **one** file named “J_DRIVE_(J).tib”, measuring 32.9 **GB**. Right-clicking on that file and selecting “Properties”, I then subtracted the “Created” time from the “Modified” time to get a duration of 30 minutes, 59 seconds. That’s the best I could do for a total backup time.

ATI can also mount its images, via its “Tools and Utilities” feature, which can be accessed through the program itself, or via Windows Explorer. Opting for Explorer, I right clicked on J_DRIVE_(J).tib. On the menu that appeared, I hovered the mouse pointer over “Archive” until a smaller sub-menu came up, and then I clicked on “Mount”. The ATI mounting process was as fast as GFW (about eight seconds), but I **wasn’t** asked for my choice of drive letter. ATI made its own selection, automatically. The MD5 sum comparison ran **much** slower: 1 hour, 21 minutes, 19 seconds, with no errors.

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Another option on the ATI “main screen” was “Create bootable media”. That took me to the “Acronis Media Builder”, where a “wizard” walked me through the process of creating a boot CD. Well, sort of. I tried this procedure about a dozen times. All but **once**, my computer suddenly rebooted somewhere along the way. That one time, I got through to the end, and created a 82.2 MB file that I named ATIBCD11.ISO. Then, I burned that image to a CD-RW disk, shut down my computer, removed my Windows boot and data hard disks, inserted my unallocated 80 GB target hard disk, kept my USB drive connected, and booted from that newly burned CD-RW disk. Things looked OK for a while there. I got a good looking graphic screen, and it seemed to be booting nicely; but then it bombed. So I burned a different CD-RW disk, with a different CD creation program. (The first time, I used Nero under Windows. The second time, I used K3B under Ubuntu Linux). It bombed again, at the exact same point (as far as I could tell, anyway). Having tried two different disks and two different creators (not to mention two different operating systems), that left only one conclusion: I’d made a **bad** CD image.

Not having the time **or** the patience to fool with Acronis Media Builder anymore, I went to the Acronis website, to see if they had any pre-made CD images for download. They did, but only for registered users; and what’s more, a user had to create an account in order to get to them. (Personally, I wouldn’t want to “create an account”, even if I

was a registered user). At one point, they expressly said that ISO images weren’t permitted for trial versions. So maybe my Media Builder problems were **not** accidental. Maybe that feature was deliberately disabled. If so, they could have popped up a box saying something like; “This function is not available for trial use”. As it is, I can’t tell if my problems were due to their providing me with an unstable product, or due to deliberate sabotage. **Either** of those possibilities reflects poorly on them, and “leaves a bad taste in my mouth”.

Still wanting to do a restoration, I started ATI and clicked on “Go to main screen” as before. There, the bottom half of the screen was filled with “My backups”; and under that, “J_DRIVE (J:)” was listed, with a “Recover last version” button sitting right next to it. Clicking that brought up a “Disk Recovery” sub-window containing a “Choose recovery destination” box. I clicked on the down-arrow on the right hand side of that box, and got a drop-down list with four locations, one of which was the “Unallocated space” in my empty target hard disk. I chose that, and then clicked on the “Recover now” button at the bottom of the sub-window. That launched a “Recovery Progress” pop-up window, with a “Time remaining” estimate of 34 minutes, and a slide bar graphic. Like the backup, there were **no** “percent completed” or “elapsed time” indicators; and when it finished, the pop-up window just disappeared, leaving **no** parting messages of any kind. From my watch, I calculated a total

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restoration time of 30 minutes, 56 seconds. My MD5 comparison ran 32 minutes, 3 seconds, with no errors. Adding those restore and compare times yielded a total of 1 hour, 2 minutes, 59 seconds. More than **eighteen** minutes faster than the virtual compare. (That “mount drive” feature **isn’t** looking all that good anymore). Aside from my Media Builder problems above, my overall impression of ATI was positive; but those missing indicators (among other things) made it seem too “dumbed down” for my own personal preferences. Having finished with ATI, I uninstalled it from my XP system. Then, I installed IFW in its place.

Stage One, Backup 7 of 7 (Image for Windows)

Because the IFW trial download was a mere 6.9 MB, I was afraid that it might be one of those “setup” downloads, which need to call out over the web to get most of their files. (That wouldn’t have worked, because my XP system is **not** allowed to connect to the Internet anymore). Fortunately, that **wasn’t** the case, and IFW installed just fine. (I’m impressed with the folks at TeraByte Industries, the “Image” manufacturers. Not only are they producing IFD, a cutting-edge program that can still boot from a DOS floppy, but they’re also, obviously, still writing “tight” code. Hopefully, for **all** their products). Anyway, when I started IFW, I got a “Welcome to Image for Windows” window, with a list of operations similar to those for IFD. “Backup (Full)” was **already** selected, so I just clicked the “Next >” button at the bottom. That took me to the “Select the hard drive or

partitions to backup” screen, which displayed a “Computer” tree listing **all** of my current hard disks and all of their partitions (**including** the Windows boot partition, C:). I checked “(K:) K_DRIVE”, then clicked the “Next >” button again. That took me to the “Select where you want to save the backup” screen. There, I clicked “U: (Expansion Drive)”, then clicked the “Next >” button yet again. That took me to the “Enter a filename for the backup” screen. There, I changed their suggested name to “K_IFW_SRTEST1”, then clicked the “Next >” button yet again once more. That took me to a screen that was just labeled “Backup”, but which actually contained fifteen options. I accepted the defaults for everything except “File Size”, which I re-set to 2 GB. Then, I clicked the “Next >” button one last time. That took me to the “Summary” screen, where I could review my selections, and then click the “Start” button to begin. That took me to the “Operation” screen. It was fully graphical, but otherwise very similar to the screen used by IFD (and IFL). Its “Time Remaining” indicator read “35 minutes”. When IFW finished, its “Time Elapsed” indicator gave me a total backup time of 35 minutes, 20 seconds. When I looked at my USB drive, I found 19 sequentially named files: 18 measuring 2 GB each, and the last measuring 115 MB, for a total of 36.1 GB.

IFW offers a number of ways to access its backup images. I could work through IFW itself, using its “Restore (Automatic)” or “Restore (Normal)” options. I could abandon

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IFW **and** Windows completely, and use either Image for DOS or Image for Linux. I could use TBIView (a separate Windows program included with IFW) to view the contents of my image, and then extract as few or as many of its files as I wanted. Or I could use TBIMount (another separate Windows program included with IFW) to mount my backup image as a virtual drive. Following my previous pattern, that's what I decided to do first. As with GFW and ATI, this can be done directly through TBIMount, or indirectly via Windows Explorer. Opting once again for Explorer, I went to the U: drive, right clicked on K_IFW_SRTEST1.TBI (the **first** segment of my backup image), and selected "Mount as Drive Letter" from the menu. Like GFW and ATI, it only took about eight seconds to mount. Annoyingly, like ATI, it **didn't** let me pick the drive letter to use. Going to that drive, I ran the MD5 sum comparison, and it took 36 minutes, 2 seconds, with no errors.

Wanting to do a restoration through IFW itself, I started it up. At the "Welcome to Image for Windows" window, I selected Restore (Normal) and clicked the "Next >" button. That took me to the "Select where the backup file is located" screen. There, I picked "U: (Expansion Drive)", then clicked the "Next >" button again. That took me to the "Select the backup file to restore" screen, which displayed a list

of available backup files. I chose "K_IFW_SRTEST1.TBI", then clicked the "Next >" button yet again. That took me to the "Select the drive or partition(s) to restore" screen. I picked "K_DRIVE", then clicked the "Next >" button yet again once more. That took me to the "Select where to restore the partition(s)" screen. I chose "Free Space" on my target hard disk, then clicked the "Next >" button yet again even furthermore. That took me to a screen that was just labeled "Restore", but which actually contained sixteen options. I accepted the defaults for everything, and just clicked the "Next >" button one last time. That took me to the "Summary" screen, where I could review my selections, and then click the "Start" button to begin. That took me to the "Operation" screen. As before, it was fully graphical, but otherwise very similar to the screens used by IFD and IFL. Its "Time Remaining" indicator read "28 minutes". When IFW finished, its "Time Elapsed" indicator gave me a restore time of 28 minutes, 39 seconds. Going to my newly restored hard disk, I ran the MD5 sum comparison, and got a time of 25 minutes, 26 seconds, with no errors.

Adding those two times gave me a total of 54 minutes, 5 seconds. Here, the "mount drive" feature started to look good again. Remember, the MD5 compare on my earlier IFW mounted drive took 36 minutes, 2 seconds. That's 10 minutes, 36 seconds **slower** than just the compare time

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above, but 18 minutes, 3 seconds **faster** than the combined restore and compare times. **Finally**, mounting an image as a drive saved some time.

Feeling good about that, I decided to indulge myself and perform one more experiment. I backed up my Windows C: drive using IFW itself. That took 8 minutes, 32 seconds. (It was a small partition, barely 17 GB long, with only 6.6 GB actually in use). It created just two files on my USB drive, one 2 GB and one 782 MB, for a total of 2.7 GB. IFW doesn't fool around making custom boot CDs. It clearly states; "To restore the operating system itself, you'd need to restore it using Image for DOS, Image for Linux, or Image for Windows from an alternate location". (When you buy IFW, they include **both** IFD and IFL with it, for free). I used IFD. My restore time was 9 minutes, 3 seconds, and, of course, it booted correctly. If I absolutely **had** to recommend a Windows program (say, if the fate of the universe depended on it), this is the one that I'd go with.

Now, let's take another time check. As I'm typing this, it's **13** days to my deadline, and we've gone past **9200** words. This article is **definitely** going to be a record breaker. **If** I can get it done in time, that is. Stage Two will require a **minimum** of seven days to perform, but I probably **won't** need all that many more words to report its results. Onward!

Stage Two, SpinRite Tests

I'd like to say that my Stage Two tests went uneventfully; but I can't, because SpinRite threw me a curve. Now, I've used SpinRite for a **long** time, and always to answer just **one** simple yes/no question; "Is this particular hard disk still good?" This time, I may need to ask it more. Here's what happened: I disconnected my USB drive and removed all my drawers (**except** for my data drawer). Then, I booted SpinRite from its FreeDOS floppy. Once it started running, it identified my data hard disk as "Drive 0 Add-On Controller". On its first test, it identified my primary partition (volume label L_DRIVE) as "Item 1 NTFS or OS/2 HPFS". Then, it gave me an anomalous outcome, by finishing about **three times faster** than I'd thought it would. Now, I've always trusted SpinRite completely. (Besides, it's not as if I've got anything else nearly as good to replace it with). So I just logged that reading and moved on. The rest of my SpinRite tests went pretty much as expected. It identified my first logical partition (volume label D_DRIVE) as "Item 2 Dos C: 32-bit FAT", and its finishing time came in just about as I'd predicted. The other tests resulted in similar times and similar identifications. (Each drive ID was one letter off from its volume label. Under these circumstances, that's actually **correct** operation for floppy booted DOS. Because it couldn't read NTFS, it **didn't** assign a letter to

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that first partition. To me, this was further indication that I'd had a **really** good idea when I added those unchanging volume labels). I finished more or less on schedule, with all good results. (So I **don't** have to replace my "320 GB" data hard disk). That left me with time for some further experimentation.

Re-inserting my Ubuntu drawer and booting from its hard disk, I copied **all** the files from L_DRIVE to a temporary directory on my USB drive (which I'd also re-connected). That took about 31 minutes (according to my wristwatch). Then, I ran the already existing MD5 sum file, and got no errors. That took 38 minutes, 59 seconds. After that, I deleted the L_DRIVE NTFS partition, and replaced it with an FAT32 partition (which I labeled M_DRIVE, just to be on the safe side). Then, to "regularize" my test as much as possible, I copied over all the files from D_DRIVE. (I **couldn't** just copy the original files back from that temporary directory. The **whole point** of using NTFS, which I usually dislike and mistrust, was because it could hold files larger than 4 GB. If I'd copied them back, many of those files would have bombed). Since I was just using those D_DRIVE files as "filler", I **didn't** bother to run an MD5 compare once my copy operation had completed. I just shut down, re-pulled everything but the data disk, re-booted into SpinRite, and ran it on my newly created M_DRIVE. It finished with a (long) time that was consistent with the other FAT32 results. Then I deleted my still new but no longer needed M_DRIVE. However, before creating an even

newer partition in its place, I ran SpinRite one last time, in the "unpartitioned space" where M_DRIVE used to be. It finished with a (short) time that was consistent with the NTFS result. So the presence or absence of NTFS had **no** effect on the elapsed time. As Shakespeare might have said (if he'd been writing a play called *Hamlet The Computer Nerd*): It's FAT32 or it's **not** FAT32. Having found out all I could, I created a replacement NTFS primary partition, labeled it L_DRIVE, re-copied its files back from the temporary directory on the USB drive, re-ran the MD5 sum file (successfully) one last time, and then deleted that temporary directory.

I also had one other complication. On its "S.M.A.R.T. System Monitor" screen, SpinRite displayed an unusual message. (I've only reproduced two sections of it here). "SpinRite does not have access to SMART data published by the current physical drive", and "Lack of SMART data prevents SpinRite from monitoring the drive's status while under a workload". Previously, I'd been vaguely aware that something called "S.M.A.R.T." existed, but I'd never had the "need to know" anything about it before. Now I did, so I consulted my favorite Internet oracle. (The following was paraphrased from Wikipedia, the free encyclopedia, at www.wikipedia.org): Self-Monitoring, Analysis, and Reporting Technology is a monitoring system for computer hard disks that can detect and report on various indicators of reliability, in hope of anticipating failures. The idea is that when S.M.A.R.T. anticipates a failure, the drive would be re-

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placed and returned to the manufacturer, who could then use that failed drive (and others like it) to discover where faults lie and how to prevent them from recurring on the next generation of hard disks. This sounds like something that would apply more to business or institutional users, rather than to a single user like me.

I'm not sure if I should set up further time trials for SpinRite, using smaller partitions formatted in **every** file system that I can think of; and eliminating my add-on card (which I'm pretty sure is what caused that S.M.A.R.T. message). I value SpinRite for its results (which I've always trusted implicitly), **not** for whatever time it might take to get them. Does it really **matter** if some tests take longer to run than others? We'll have to wait and see what I decide. We'll also have to wait and see if I can actually **do** Stage Three next month. As I implied at the beginning, I don't consider **any** of the drive imaging programs that I featured in this article to be right for my personal **data** backup needs; and nothing that I encountered in this article has changed my mind. If I don't find a suitable program soon, I don't know **what** I'll do for next month. In conclusion, let's take a final time check. As I write this, it's **five** days to my deadline (a short but acceptable time for proof-reading). We **did** break 10,000 words, and that's without even **getting** to Stage Three. I doubt this is a record that I'll ever come close to breaking again.

See you next month.

Appendix I, Afterthoughts

OK. Now it **is** "next month", and obviously I **didn't** do Stage Three. I won't be doing it in our next issue, either, because that's our Special Trenton Computer Festival Issue, and I've got something "special" planned for it. Hopefully, I'll get to Stage Three eventually. Right now, though, I've lost my record by splitting this article in two; but I haven't really **gained** anything yet. To fix that, I've added some wrap-up comparisons; and I'm **not** just going to compare my backup results with each other. I'll also be comparing them all to **brand new** backups made by Image for Linux, too. Furthermore, I'll be calculating compression ratios and relative backup speeds as well. So let's get to it.

We'll start with L_DRIVE, the first partition on my data hard disk, which contained files totaling 35.8 GB. When backed up with FSArchiver (File System Archiver, or FSA), it produced a 32.1 GB image in 2 hours, 13 seconds. When backed up just now with IFL, it produced a 33.3 GB image in 33 minutes, 24 seconds. (Previously, L_DRIVE had **also** been backed up with IFD. That produced a 33.3 GB image in 54 minutes, 35 seconds). Calculating compression ratios, both IFD and IFL yielded ratios of 1.075 to 1 (hereafter to be referred to as 1.075x compression), while FSA yielded 1.115x compression. Calculating speeds, IFL

Continued on page 7

measured 1.07 GB per minute, IFD measured 0.65 GB per minute, and FSA measured 0.298 GB per minute. Looking at L_DRIVE itself with my file browser, I quickly identified 18 Ghost for DOS backup images, totaling 17.1 GB. Being already compressed, those **couldn't** be compressed any more. Plus, there were another 4 files (totaling 14.4 GB) that I think **might** already be compressed. The presence of these files adequately explains our relatively pitiful compression results; and probably also explains the much longer FSA backup time. Those compression results above may look similar, but they're **not**. In these tests, I always accepted the default compression settings. Yet both IFL and IFD compressed files totaling 35.8 GB into 33.3 GB images, while FSA compressed that same 35.8 GB into a **32.1** GB image. In the presence of so many uncompressable files, a difference of 1.2 GB in output image size means that the default compression setting for FSA had to be a **lot** higher than IFL (or IFD). Since higher compression equals slower speed, that size difference accounts for that speed difference. (While the greater speed of IFL over IFD can only be explained by the difference between Linux and DOS).

The second partition on my data hard disk, D_DRIVE, contained files totaling 41.4 GB. When backed up with Clonezilla (CZ), it produced a 40.1 GB image in 2 hours, 34 minutes, 33 seconds. When backed up just now with

IFL, it produced a 40.7 GB image in 38 minutes, 49 seconds. Calculating compression, IFL yielded 1.017x, and CZ yielded 1.032x. Calculating speeds, IFL measured 1.067 GB per minute, while CZ measured 0.268 GB per minute. This time, we got even more pitiful compression figures, though the one for CZ **is** higher; but was it really worth that enormous speed loss?

The third partition, E_DRIVE, contained files totaling 41.3 GB. When backed up with Partimage (Partition Image, or PI), it produced a 38.5 GB image in 2 hours, 38 minutes, 48 seconds. When backed up just now with IFL, it produced a 40.3 GB image in 40 minutes, 35 seconds. Calculating compression, IFL yielded 1.025x, and PI yielded 1.073x. Calculating speeds, IFL measured 1.018 GB per minute, while PI measured 0.260 GB per minute. Another size/speed conundrum.

The fourth partition, F_DRIVE, contained files totaling 42.0 GB. When backed up with IFD, it produced a 40.6 GB image in 1 hour, 5 minutes, 32 seconds. When backed up just now with IFL, it produced a 40.6 GB image in 43 minutes, 3 seconds. Calculating compression, IFL and IFD both yielded 1.034x. Calculating speeds, IFL measured 0.976 GB per minute, while IFD measured 0.641 GB per minute. Linux beats DOS again.

The fifth partition, I_DRIVE, contained files totaling 40.4 GB. When backed up with GFW, it produced a 39.8 GB

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image in 39 minutes, 43 seconds. When backed up just now with IFL, it produced a 39.4 GB image in 41 minutes, 15 seconds. Calculating compression, IFL yielded 1.025x, and GFW yielded 1.015x. Calculating speeds, IFL measured 0.979 GB per minute, while GFW measured 1.017 GB per minute. Another size/speed conundrum, this one **really** close; and **not** favoring Linux.

The sixth partition, J_DRIVE, contained files totaling 33.5 GB. When backed up with ATI, it produced a 32.9 GB image in 30 minutes, 59 seconds. When backed up just now with IFL, it produced a 32.8 GB image in 33 minutes, 57 seconds. Calculating compression, IFL yielded 1.021x, and ATI yielded 1.018x. Calculating speeds, IFL measured 0.987 GB per minute, while ATI measured 1.081 GB per minute. Yet another size/speed conundrum, this one even closer; and **not** favoring Linux again.

The seventh partition, K_DRIVE, contained files totaling 37.6 GB. When backed up with IFW, it produced a 36.1 GB image in 35 minutes, 20 seconds. When backed up just now with IFL, it produced a 36.1 GB image in 37 minutes, 42 seconds. Calculating compression, IFL and IFW both yielded 1.042x. Calculating speeds, IFL measured 0.997 GB per minute, while IFW measured 1.064 GB per minute. No explanations or excuses this time. Linux just flat out lost.

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I made one last experiment with IFW above, and I wanted to repeat it here with IFL, too. So I removed all my drawers, and inserted **only** the drawer containing the Windows XP boot hard disk. Then I booted from the IFL Linux live-CD, connected my USB Expansion Drive (so I'd have a target for file creation), and used IFL to back up the Windows C: partition. That took 3 minutes, 54 seconds. Just like IFW, IFL created only two files on my USB drive, one 2 GB and one 782 MB, for a total of 2.7 GB. (IFW, IFL and IFD were designed to use the **same** image file format. So, given nearly identical input, you'll get nearly identical output). As I said under IFW above, there were only 6.6 GB actually in use on that particular disk; but even that's not quite true. Like its Windows counterpart, IFL had "Omit Page File Data" checked by default, so I **didn't** process pagefile.sys either time. Deducting 2 GB for that, I really only backed up 4.6 GB. Calculating compression, IFL and IFW both yielded 1.704x. (That's a **much** more typical compression result. Apparently, **all** of my data partitions are just chock full of uncompressable files, but my Windows C: drive **isn't**). Calculating speeds, IFL measured 1.179 GB per minute, while IFW measured 0.539 GB per minute. Now, some of that difference can be explained because IFW had to "freeze" all of XP's open files as it ran, but **I don't care!** A win is a win, and we're going out on a win for Linux.

See you next month. ☐

IRS Affiliates Again Offer Free Online Filing

by Ira Wilsker

It is again that time of year that we are receiving those dreaded W-2 and 1099 forms. This year due to a local holiday in Washington, DC, we actually have until April 18 to file, rather than the traditional April 15 that we have all come to approach with trepidation. The Sunday newspaper sale books, big box stores, and online retailers are rife with deals on tax preparation software, including big discounts, rebates, gift cards, package deals where the tax software is bundled with other software; one big box store is even offering the major tax software titles with a \$15 gift card and up to \$1200 worth of other non-tax software programs at deep discounts, many of which are “free after rebate” (read the details in the store carefully before the purchase!). The TV and newspaper are loaded with advertisements for commercial tax preparation services, and one local tax preparer has some poor soul standing for long hours on the street corner outside of his temporary store front location, wearing a foam Statue of Liberty costume, and carrying a sign touting the tax service.

Depending on our individual circumstances, we have a lot of options that we can utilize in order to complete this annual event. Many of us still choose to use the traditional pencil and paper method to fill in the blanks on what we hope is the correct tax form. Others have decided to use one of the many independent or franchised tax services that

spring up in retail stores or in vacant store fronts every spring, like mushrooms on my lawn after a heavy rain. Some choose to use the expertise of CPA’s to prepare their taxes, while millions of others purchase commercial tax software to prepare their income taxes. Once again there is a free alternative available to millions of people to prepare their federal income taxes, and that is the FreeFile service offered by the 16 participating members of the IRS approved “Free File Alliance”. For those who still desire to do their own tax calculations, there is also one additional IRS approved provider who offers simple online forms that can be filled in by the user, calculated by the user, and then e-filed, all for free.

Visitors to the IRS FreeFile website at freefile.irs.gov will find the process easy to navigate and use. According to the IRS, everyone, regardless of income and circumstances, is eligible to use at least some of the free online services. At the FreeFile website, the user follows three simple steps to prepare, calculate, and files his taxes. First, the IRS suggests that the user gathers last year’s tax forms, as well as this year’s (2010) W-2, 1099, and other tax statements. The IRS then requests that the user calculates his “AGI” or “Adjusted Gross Income” to determine which of the free services he is eligible for. Wikipedia defines AGI as the gross income “... less allowances for personal exemptions

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and itemized deductions. Adjusted gross income is gross income less certain specific items.” The reason for this preliminary determination is to determine the individual’s eligibility for any or all of the 16 free online tax services. Individuals or families with an AGI of less than \$58,000 may be eligible for the free online tax services, while those with an AGI of more than \$58,000 can still use the free online forms to calculate their own taxes, and then use the free e-file service. According to the IRS, about 70% of all taxpayers are eligible for the free full-service online filing by having an AGI of less than \$58,000

The second step is to either select a FreeFile provider (if eligible), or to use the free online forms. A wizard is available to help the user select a free provider, or the user can select from the list provided by the IRS. The wizard asks a few questions to determine the proper provider, these questions being your age, your AGI, your state of residence, eligibility for an earned Income Credit (if known), and if you or your spouse earned pay from the military. Answering these few questions will present the eligible user with a list of IRS approved providers who will offer complete online tax calculations and e-filing services. For the eligible user who desires to manually select his provider of free federal tax services, many of the providers will have familiar names. Some of the best known providers of the free online tax service include H&R Block (Free federal online tax return preparation and e-file if your adjusted

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gross income (AGI) is \$58,000 or less and you are age 51 or younger. This federal offer is valid in all states); TurboTax (Free federal online tax return preparation and e-file if your adjusted gross income (AGI) is \$31,000 or less or if you are active military with an AGI of \$58,000 or less or you qualify for the Earned Income Tax Credit. This federal offer is valid in all states); and TaxAct (Free federal online tax return preparation and e-file if your adjusted gross income (AGI) is \$58,000 or less and you are age 19 through 55. This federal offer is valid in all states). Other FreeFile providers have specific state residence requirements, military pay, other lower income requirements, or age requirements. All of the free providers use sophisticated tools and strategic online interviews to properly prepare the user’s taxes, and perform all of the calculations. As long as the user accurately answers the online questions, and correctly enters the requested information, all 16 of the FreeFile providers will provide accurate results. It should be noted that while all 16 providers will likely do a satisfactory job completing federal tax forms, none of them will complete state tax forms for free; most of them will complete state tax forms for a fee, typically in the \$10 range, but the state fees do vary. The IRS has also compiled a list of the 22 states that have their own free filing services, and this list is available at freefile.irs.gov/get-more-information.html.

The third and final step is e-filing the tax return. All of the listed FreeFile providers will electronically file (e-file) the

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completed tax return utilizing a secure encrypted system, directly with the IRS. A digital confirmation receipt is generated, and the user can track the progress of his refund, if a refund is due. the user can also print a copy of his completed tax forms for his own records. The user can optionally select to have his refund (if any) direct deposited into his existing bank or credit union account, which will be deposited much faster than waiting for a paper check in the mail. According to the IRS website, users who e-file and have a refund direct deposited can expect the refund to be posted to his account in as little as 10 days. If a balance is due the IRS, the user can select to pay the IRS directly by check or money order, or for a nominal fee to pay the IRS electronically online.

The IRS has set high standards for safety and security which the Free File Alliance participants are committed to abide by. According to the IRS, the user may want to use the FreeFile service (if eligible) because it is "Fast, Safe, and Free". According to the IRS, over 30 million taxpayers have taken advantage of the FreeFile system since its inception. Available 24 hours a day and seven days a week, the FreeFile system is readily accessible, easy to use, and can provide a valuable service to the taxpayer. An entire federal tax return can be prepared and sent to the IRS from the user's computer, without the need to go elsewhere or buy anything. The system is safe and secure, and can be used by those eligible at their convenience, but remembering the April 18 deadline. For those who are eligible, and about 70% of you are indeed eligible, this FreeFile service pro-

Hard Drives

Wil Wakely (wilw(at)adnc.com), Seniors Computer Group, California (www.SCGsd.org)

We all talk about the hard drives in our computers, of which most computers have at least one. But what is their history and how do they work? The first commercial hard drives by IBM appeared in 1956 with multiple disks 2 feet in diameter. Those ancient drives contained only 30MB of fixed data and 30MB of removable data, so they were called Winchester drives in honor of the historic 30/30 rifle.

What we have now are smaller cousins to those huge main-frame disks. They are constructed of thin aluminum or glass disks (platters), 3 1/2" diameter, which are coated with a very thin layer of magnetic material. Similar to a record player's tone arm, a read/write (R/W) head at the end of an arm quickly moves across the platter surface and either magnetizes (writes) a tiny area or detects (reads) the magnetic polarity of the same area. The R/W head does not

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touch the disk and literally flies over the surface on a thin layer of air.

Any dust or dirt under the head can cause a crash, so the drive must be very clean and carefully sealed. A north magnetic pole might designate a 1, while a south pole would be a 0. These ones and zeros are later converted to numbers or letters.

The extremely tiny magnetized area locations on the disk are designated (addressed) by a Cylinder and Sector combination. Cylinders are numbered concentric circles on the disk similar to the grooves on an LP record. Sectors, also numbered, are short segments of each cylinder with each sector usually containing about 4KB of data. These cylinder/sector locations (addresses) are stored in a Table of Contents called the FAT (File Allocation Table) which identifies the location where each file is stored. A second copy of the FAT is also kept on the disk as insurance, because a corrupted FAT can't locate the file. Disaster!

The disks spin very fast, typically 7200 RPM, and the R/W head moves quickly to the address of the data, so data writing and retrieval is extremely fast, on the order of milliseconds. (300 MB/second) A file larger than 4KB must be stored in more than one sector or address. If these sectors are all stored in sequence on a single cylinder, one after the other, they can be read very quickly without moving the R/W head; however, if they are scattered all over the disk surface, the R/W head must take extra time to search for

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them. They get scattered because some sectors are already full and other, empty ones that are located elsewhere on the disk must be used.

A scattered file is considered Fragmented. Defragmenting rewrites the file into one continuous string of sectors, which can then be read much faster. That's why periodically defragmenting your hard drive will speed up your computer.

On-board memory chips temporarily store (buffer) information to speed up R/W access.

Larger drives contain multiple platters and R/W heads, and faster disk rotation, improved R/W heads and better magnetic properties also improve speed and reliability. Read errors, which are bound to happen, are repaired by Error-correction codes written in each sector. Also, many other things happen quietly in the background to improve performance.

We now have 3 TB (terabyte) drives; want to guess what's coming next? For further info see:

http://en.wikipedia.org/wiki/Hard_disk_drive

Stay tuned.

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Controlling System Restore

Vinny La Bash(vlabash (at) comcast.net), Sarasota Personal Computer Users Group, Inc. (www.spcug.org)

Did a shareware application you were enamored of turn out to be an unmitigated disaster? Perhaps a device driver installation, system update or modification to a registry key went bad, and your system wandered into an alternate universe. Windows has a utility called System Restore that takes a picture, called a Restore Point, of your system before certain types of operations are started. System Restore is a very handy feature that allows you to go back in time to erase actions you have come to regret. If a problem occurs you can revert back to the way things were, and all is well again.

System Restore, for all its utility and convenience, has its drawbacks. Some argue that if there is not enough free disk space, System Restore will fail to create a restore point, so an unsuspecting person may discover that there is no restore point available when trying to put things back to normal. There is also no way to make a permanent restore point that will not get deleted after a time when automatic restore points need the disk space. This could be a predicament if a problem is intermittent.

It is possible that System Restore may be responsible for your disk drive running out of room. While today's super-sized drives make that less likely than a few years ago running out of disk space could still happen, especially

if you load up your system with videos. You can reduce that likelihood even further by configuring System Restore properly.

The snapshots we talked about in the first paragraph are taken by a built-in program called the Volume Snapshot Service (VSS). There is no way to access this utility in the standard Windows Graphical Utility Interface (GUI). This means you can't get to it with a menu option. You need to open a Command Prompt window with elevated administrator privileges.

Click on the Start orb located down at the bottom left corner of your screen, select All Programs, and open the Accessories folder. Right click on the Command Prompt icon, and then select Run as Administrator from the menu. That will open up a Command Prompt window with enough authority to configure System Restore.

Before doing any configuration, let's take some time to understand how System Restore works. You can do this with the vssadmin tool. At the Command Prompt type **vssadmin /?** (Press Enter after typing a command.)

You see a list of all the commands supported by the utility.

(Note: Shadow copy = Restore Point)

Enter the command **vssadmin list shadows**

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This displays a list of all the restore points currently on the system. The list shadowstorage command displays the amount of disk drive space currently being used to store restore points, how much space is set aside to accommodate restore points, and the maximum permitted size for restore points.

To see what's available on your own system, at the Command Prompt type: **Vssadmin list shadowstorage**

Take a few minutes to understand the way the information is displayed. If there is enough free disk space you can store up to 64 restore points before Windows automatically starts deleting old restore points to accommodate new ones.

Making backups is an essential task, but there is no reason why Windows should be allowed to consume every available byte of storage with System Restore points. The default settings allow Windows to run amok but you can reset the maximum value with the **resize shadowstorage** command.

Here is an example:

Vssadmin resize shadowstorage /for=c: /on=c: /maxsize = 12GB The /for= switch specifies the disk drive where the storage space is to be resized. The /on= switch tells Windows where to save the Restore Point. The /maxsize= switch tells Windows how much space it can use for Restore Points.

If you don't specify a maximum size you are giving Windows permission to do anything it wants. The minimum size is 1GB. I have seen references stating that the minimum size can be as low as 300MB, but I could not verify that information.

After entering the **resize** command the system needs to be restarted to take effect. Configuring System Restore points won't solve every problem you may have with Windows, but it will give you more control of how Windows allocates resources.

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MP3 Tag - A Useful Utility

Phil Sorrentino (president (at) spcug.org), Sarasota Personal Computer Users Group, (www.spcug.org)

As I have said in the past, “Utilities are usually small programs that are intended to do a specific task or a small range of tasks.” And I have also directed you to the SPCUG Monitor Computer Buffet, where you can learn about various free utilities (and even find a website from where you can download the utility). However, keep in mind that when you download something from the internet, you could get something you were not expecting; so be very careful. With that said, I’d like to discuss a free utility that allows you to modify the MP3 Tag information that is used by MP3 players like Windows Media Player or iTunes.

The reason you might want to use an MP3 Tag utility is because these types of media players depend on the Tag information to organize the tunes they find in your music folders. If the Tag information is not what you expect, the tune will be put in a location that might make it difficult for you to find. It doesn’t matter what the file name is, the tune will be put in a sequence depending on the Tag information, only. Is it “The Beatles”, or “Beatles”, “The Kingston Trio”, or “Kingston Trio”? When I put all my tunes together, I found both versions of artist names. Also, sometimes the tune comes from a compilation of artists. In this case it probably goes into the “Various Artists” category, instead of the “artist’s name” category.

MP3Tag is a free metadata editor that supports the MP3 audio format as well as many other formats such as AAC, FLAC, MPC, OGG, MP4, WMA, and others. It runs under Microsoft Windows XP and Vista (and probably Windows 7). MP3Tag allows the user to modify the ID3 tag data that is created along with the MP3 file when a tune is initially created, or ripped from a CD. It allows information such as the title, artist, album, track number, or other information about the audio portion of the file to be stored in the file itself. By the way, there are many MP3 Tagging utilities available, just Google MP3 Tag and you’ll see all the possibilities.

This may be too much detail, but there are two unrelated versions of ID3: ID3v1 and ID3v2. (If this is too much detail, skip this paragraph entirely.) ID3v1 was the original attempt at capturing data about the tune. ID3v2 followed shortly after and is very different from the v1 version. ID3v2 is fairly complex, but suffice it to say that it includes all of the pertinent information, and then some, relating to the specific tune. ID3v2 has been modified and improved over the past few years and is currently at ID3v2.4. For those of you who asked “What the heck is metadata?, here is a brief discussion that comes from Wikipedia. Metadata (or sometimes metainformation) is “data about other data”, of any sort in any media. An item of metadata may describe

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an individual datum, or content item, or a collection of data including multiple content items and hierarchical levels. In data processing, metadata provides information about, or documentation of, other data managed within an application or environment. This commonly defines the structure or schema of the primary data. For example, metadata would document data about data elements or attributes, (name, size, data type, etc.) and data about records or data structures (length, fields, columns, etc.) and data about data (where it is located, how it is associated, ownership, etc.). Metadata may include descriptive information about the context, quality and condition, or characteristics of the data. And there you have a description of metadata.

MP3Tag is very easy to use. First, I have created a folder called “FixThese” in my “MP3Music” folder, where I put any tunes that I think need to have their ID3 tags modified. Then I setup MP3Tag to use this folder. This way, I do my work in a specific folder so I don’t upset anything in the folders that contain all my music. Also, it is easier to work with a folder that has a handful of files rather than thousands of tune files. (The folder to be used is setup by clicking “File” and then selecting “Change Directory”, then navigating to the directory of your choice, “D:\MP3Music\FixThese” in this case.)

The MP3Tag window has two panes. The right-hand pane shows the files in the designated folder. The left-hand pane

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shows each of the specific ID3 data items that can be modified. (By the way, default values can be setup for each of these items, but I have left the default to “keep”, so that I preserve the values when a tune is selected. These default values can be setup in the Tools-Options-Tag Panel window.) When you select a tune in the right-hand pane, the appropriate values show up in the ID3 tag items on the left. Once the tune selection is made, the values on the left can be changed to your desired values. In the example shown above, the tune “Ventures – Hawaii Five-O.mp3” has been selected. The Title is “Hawaii Five-O – The Ventures” which is the file name. The title of the tune should be only “Hawaii Five-O”, so I would change the title to be such. The Artist: name is “Various – Adult” which I would want to change to “Ventures”, or possibly “The Ventures” if that is how you are referring to this artist. Other information such as Album, Year, and Track may be correct as indicated and will probably be left alone. Genre is an item that is not as well defined as the other tags and therefore I have found it to be less useful. Genre has some general meaning but the meanings may vary a lot from person to person. There are some fairly specific meanings for genre such as “Rock & Roll”, “Country”, “Classical”, but many other meanings are in the grey areas such as “Popular” and “Easy Listening”. If you want to employ this tag to any degree of usefulness, you’ll have to make your own definitions and then

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MP3 Tag, *continued*

categorize all your tunes according to these definitions. Otherwise, you'll get whatever the recording studio used for their definitions of genres. After you are satisfied with the changes you have made, click "File" and then select "Save tag" or just click on the icon that looks like a floppy disk, to save the tag information with the tune.

MP3Tag is a useful utility if you are accumulating a large music collection and you have some specific ideas about how you would like the tunes to be organized. MP3Tag has a lot of additional features. I have described the ones that, I feel, are basic to organizing a music collection. Music collections have a way of growing in all directions and using an MP3 Tag utility is a way of controlling that growth.

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35th Anniversary Newsletter CD Now On Sale



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Back Issues Still Needed

Our collection remains incomplete. Below is a list of missing newsletters. Anyone who lends us one of these (or supplies a good clear copy) will receive the next CD as our thanks.

1975: #2 and #3 (dates uncertain)

1976: January

1984: August

1985: June, July, August, September. 

SIG News

C/C++ Programming

Bruce Arnold (barnold@blast.net)


<http://www.blast.net/barnold>

This is a forum for discussion of programming in general, beginning and intermediate level C, C++, C-Win programming, hardware, algorithms, and operating systems. We demonstrate real programming in a non-intimidating way, presenting complete code for working programs in 3-5 sheets of paper. Sample code is posted on our Web page after each demonstration.

February: (Jan.2011 cancelled program.) HostShell - A Shell Program to Manipulate the HOSTS Virus and Spyware Protection. Object: To provide extra user features for the HOSTS file obtained from

<http://www.mvps.org/winhelp2002/hosts.htm>

The HOSTS file is part of the Internet software on all computers, but the standard file provides no extra protection. From Wikipedia: Specially crafted entries in the hosts file may be used to block online advertising, or the domains of known malicious resources and servers that contain spyware, adware, and other malware. The above web site provides a system that blocks approximately 20,000 bad web sites.


For details and sample code, visit our Website. *Our next meeting March 15.* 

Mobile Devices

Brenda Bell (mobdevsig@acgnj.org)

The Mobile Devices SIG meets the second Wednesday of alternate months, 7:30PM at SPRS in Scotch Plains, NJ.

The Mobile Devices SIG focuses largely on current-generation cellphones and smartphones (such as Blackberry, Android, iPhone) which bridge the gap between basic cell phones and traditional computers, and how they can help you manage and organize your life.

Our membership ranges from those who have recently acquired their first, basic cellphone to those who develop applications for today's modern smartphones, iPods, and ultraportable computers. While we expect to spend much of our time investigating the built-in features and specialized applications available to modern smartphones, if you bring your basic (or multimedia) cell phone, iPod, or other mobile device with questions on how to use it, where to find applications, or what features they have, we are always happy to help! Meet and greet and plan where this event goes. Bring all your ideas, PDAs, fancy phones, etc. **Our next meeting March 9.** 

Layman's Forum

Matt Skoda (som359@aol.com)

<http://www.acgnj.org/groups/laymans.html>

We meet on the second Monday of the month (no meetings in July and August) to discuss issues of interest to novice users or those who are planning to get started in computing. Watch our Web page for updates and announcements. ☐

Firefox ActivityFirefox@acgnj.org

This SIG is intended to be an open forum for **all** Firefox and Mozilla techniques and technologies, to encourage study and development of web sites of all kinds. All browsers will be considered and examined. All are encouraged to "think out of the box" about new web site design. All members and guests are invited to check out the design concepts and voice their opinion. **Next meeting, March 21.** ☐

NJ Gamers[Gregg McCarthy \(greggmajestic@gmail.com\)](mailto:greggmajestic@gmail.com)<http://www.NJGamers.com>www.lanparty.com

The next Friday Night Frag will be March 11, 6 p.m. to Saturday 12 noon — 18 hours for 5 bucks!

BYOC - Bring your own computer

BYOF - Bring your own food.

and if you don't like sitting on metal chairs... BYO chair! ☐

LUNICS (Linux/Unix)[Andreas Meyer \(lunics@acgnj.org\)](mailto:AndreasMeyer@acgnj.org)<http://www.acgnj.org/groups/lunics.html>

LUNICS is a group for those who share an interest in Unix and similar operating systems. While we do quite a bit with Linux, we've also been known to discuss Solaris and BSD as well. We meet on the first Monday of the month at the Scotch Plains Rescue Squad. See the web page for directions and more information.

Our next meetings March 7, April 4 ☐**Window Pains**[John Raff \(jraff@comcast.net\)](mailto:JohnRaff@comcast.net)<http://www.acgnj.org/groups/winpains.html>

Our intent is to provide members with Windows oriented application discussions, Microsoft and Linux style. Presentation to be directed to more heavy technological level of attendee, although newbies are welcomed.

March 18: Bruce Arnold presents a "Computer Language Shootout". ☐

Main Meeting<http://www.acgnj.org/groups/mainmeet.html>[Mike Redlich \(mike@redlich.net\)](mailto:MikeRedlich@mike@redlich.net)

March 4: Brian and Tiffany Welch Present an "Introduction to Facebook."

April: Meeting is cancelled because of TCF. ☐

March 2011

Web Dev[Evan Williams \(ewilliams@collaboron.com\)](mailto:EvanWilliams@collaboron.com)

This SIG is an open forum for all Website Development techniques and technologies, to encourage study and development of web sites of all kinds. All languages will be considered and examined. The current project is a CMS for the club. Anyone interested in starting a new project, come to the meeting and announce / explain. Provide as much detail as possible. WebDev should be an all-encompassing development and examination forum for all issues, applications, OS, languages and systems one can use to build Websites. We currently have two Web dev languages .NET and Java as SIGs but other languages and OS need to be investigated, examined and tested; Windows, Linux, UNIX, DEC, Vax, HP etc. Intel-PC, Motorola - MAC etc. **Our next meeting April 13.** ☐

Java[Mike Redlich \(mike@redlich.net\)](mailto:MikeRedlich@mike@redlich.net) <http://www.javasig.org>

February: Android 101 — This month's meeting featured Barry Burd providing a technical overview of Android. This presentation will cover fundamentals of the Android operating system, the app development lifecycle, and tools you can use to publish your app. We covered everything from Cupcake (Android 1.5) to Gingerbread (the brand-new Android 2.3) and beyond. **March 8: To be announced.** ☐

Hardware Activity[Mike Reagan \(hardware@acgnj.org\)](mailto:MikeReagan@acgnj.org)

This group is dedicated to repairing, refurbishing and/or recycling older computers. Ten people attended the first meeting of the ACGNJ Hardware Activity; so there is still a market for this type of event. One guy came all the way from the Bronx! Although we looked at some of the older equipment stored in the back room, most of our time was spent in talking about past experiences and planning for the future. Hopefully, we can establish a viable long-term schedule of projects, and keep the interest of those who attended this inaugural meeting. If you have a hardware problem, bring it in and we can all help fix or demolish it. (no guarantees either way)

Next meeting March 24 ☐**Investment Software**[Jim Cooper \(jim@thecoopers.org\)](mailto:JimCooper@jim@thecoopers.org)http://www.acgnj.org/groups/sig_investment.html

The Investment SIG continues with presentations on how to use analysis programs TC2000 and TCNet. Large charts are presented on our pull down screen and illustrate the application of computer scans and formulas to find stocks for profitable investments. Technical analysis determines buy points, sell points and projected moves. Technical analysis can also be used on fundamentals such as earnings, sales growth, etc. We're no longer focusing on just Telechart -- if you are using (or interested in) Tradestation, eSignal, VectorVest -- or just in learning how to select and use charting and technical analysis, come join us !!

Our next meetings: March 10. ☐

Guru Corner

If you need help with any of the technologies listed below, you can call on the person listed. Please be considerate and call before 10 PM.

Software

HTML	Mike Redlich	908-246-0410
	Jo-Anne Head	908-769-7385
ColdFusion	Jo-Anne Head	908-769-7385
CSS	Frank Warren	908-756-1681
	Jo-Anne Head	908-769-7385
Java	Mike Redlich	908-246-0410
C++	Bruce Arnold	908-735-7898
	Mike Redlich	908-246-0410
ASP	Mike Redlich	908-246-0410
Perl	John Raff	973-560-9070
	Frank Warren	908-756-1681
XML	Mike Redlich	908-246-0410
Genealogy	Frank Warren	908-756-1681
Home Automation	Frank Warren	908-756-1681

Operating Systems

Windows 3.1	Ted Martin	732-636-1942
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Discount Computer Magazine Price List

As described by the DealsGuy

	1 yr	2 yr	3 yr
Computer Games	\$10.95	20.95	29.95
Computer Gaming World	14.95	28.95	41.95
Computer Shopper1	16.97	32.95	47.95
Dr. Dobbs Journal	15.95	30.95	
Mac Addict	10.97		
Mac Home Journal	15.97	29.97	
Mac World	12.95		
Maximum PC	9.95	18.95	27.95
Microsoft System Journal	21.95	39.95	
PC Gamer	12.95		
PC Magazine (22/44/66 Issues)	25.97	48.95	68.95
PC World	16.95		
Wired	6.00	12.00	17.00

These prices are for new subscriptions and renewals. All orders must be accompanied by a check, cash or Money Order. Make payable to Herb Goodman, and mail to:

Herb Goodman, 8295 Sunlake Drive, Boca Raton, FL 33496

Telephone: 561-488-4465, e-mail: hgoodman@prod-igy.net

Please allow 10 to 12 weeks for your magazines to start. For renewals you must supply an address label from your present subscription to insure the correct start of your renewal. As an extra service I will mail a renewal notice about 4 months prior to their expiration date. I carry more than 300 titles at excellent prices — email for prices. ☐

ACGNJ MEMBERSHIP APPLICATION

Sign up online at <http://www.acgnj.org/membershipApplication.html> and pay dues with PayPal.

US/CANADA		Dues	STUDENT	SENIOR CITIZEN (Over 65)
1 Year	\$25		\$20	\$20
2 Years	\$40			
3 Years	\$55			\$45

Mail this application and your check to:
 AMATEUR COMPUTER GROUP OF NEW JERSEY, INC., P.O. BOX 135, SCOTCH PLAINS, NJ 07076

☐ New Member ☐ Renewal ☐ Address Change

First Name _____ Last Name _____ Phone _____

Mailing Address _____ E-Mail _____

City _____ State _____ Zip _____ URL _____

What topics would you like to see covered at club meetings? _____

Other Local Computer Groups		
Princeton Macintosh User Group: 7:15 pm 2nd Tuesday, Jadwin Hall, A-10, Washington Rd, Princeton, (609) 252-1163, www.pmug-nj.org	Linux Users Group in Princeton: 7 pm, 2nd Wednesday, Lawrence Branch Mercer Library, Rt#1 & Darrah Lane, Lawrence NJ http://www.lugip.org	New York PC: 3rd Thurs, 7 pm, PS 41, 116 W 11th St. For info call hotline, (212) 533-NYPC, http://www.nypc.org
Computer Education Society of Philadelphia: Meetings & Workshops at Jem Electronics, 6622 Castor Ave, Philadelphia PA. www.cesop.org/	Brookdale Computer Users Group: 7 pm, 3rd Friday, Brookdale Community College, Bldg MAN Rm 103, Lincroft NJ. (732)-739-9633. www.bcug.com	NJ Macintosh User Group: 8 pm, 3rd Tuesday, Allwood Branch Library, Lyall Rd, Clifton NJ. (201) 893-5274 http://www.njmug.org
PC User Group of So. Jersey: 2nd Mon., 7 pm, Trinity Presb. Church, 499 Rt 70 E, Cherry Hill, NJ. L. Horn, (856) 983-5360 http://www.pcugsj.org	Hunterdon Computer Club: 8:30 am, 3rd Sat, Hunterdon Medical Center, Rt 31, Flemington NJ. www.hunterdoncomputerclub.org , (908) 995-4042.	NY Amateur Computer Group: 2nd Thurs, 7 pm, Rm 806 Silver Bldg, NYU, 32 Waverly Pl, NYC. http://www.nyacc.org
Morris Micro Computer Club: 7 pm 2nd Thurs., Morris County Library, Hanover Ave, Morristown NJ, (973) 267-0871. http://www.morrismicro.com	Central Jersey Computer Club: 8 pm, 4th Friday, Rm 74, Armstrong Hall, College of NJ. Rich Williams, (609) 466-0909.	NJ PC User Group: 2nd Thurs, Monroe Rm at Wyckoff Public Library, 7 pm. Maureen Shannon, (201) 853-7432, www.njpcug.org
Philadelphia Area Computer Society: 3rd Sat, 12 noon Main Meeting, groups 8 am-3 pm. Upper Moreland Middle School, Hatboro PA. (215) 764-6338. www.pacsnet.org	NJ Computer Club: 6:15 pm, 2nd Wednesday except Jul & Aug, North Branch Reformed Church, 203 Rt 28, Bridgewater NJ. http://www.njcc.org	Princeton PC Users Group: 2nd Monday, Lawrenceville Library, Alt Rt 1 & Darrah Lane, Lawrenceville, Paul Kurivchack (908) 218-0778, http://www.ppcug-nj.org

Classified

FREE TO MEMBERS. Use our classified ads to sell off your surplus computer stuff. Send copy to Classified, ACGNJ NEWS, P.O. Box 135, Scotch Plains NJ 07076 or e-mail to the editor, bdegroot@ptd.net. Classified ads are free to members, one per issue. Non-members pay \$10. Send check payable to ACGNJ Inc. with copy. Reasonable length, please.



<http://www.apcug.net>

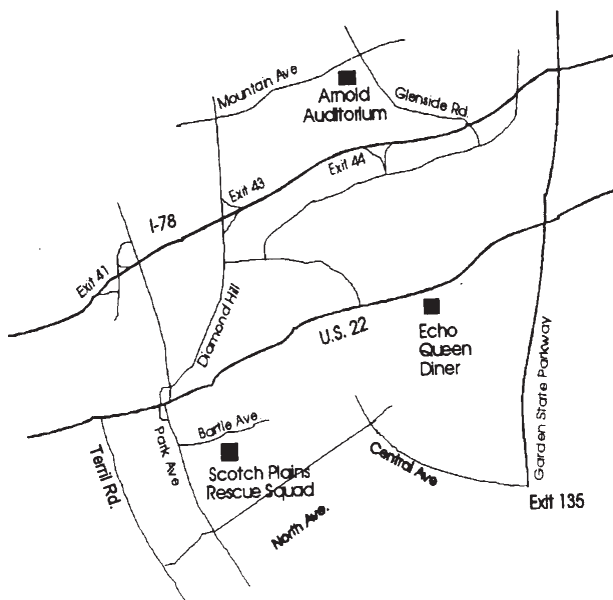
Radio and TV Programs

Computer Radio Show, WBAI 99.5 FM, NY, Wed. 8-9 p.m.

Software Review, The Learning Channel, Saturday 10-10:30 p.m.

On Computers, WCTC 1450 AM, New Brunswick, Sunday 1-4 p.m. To ask questions call (800) 677-0874.

PC Talk, Sunday from 8 p.m. to 10 p.m., 1210 AM Philadelphia. 1800-876-WPEN, Webcast at <http://www.pctalkweb.net>.



Directions to Meetings at Scotch Plains Rescue Squad, 1916 Bartle Ave., Scotch Plains NJ

From New York City or Northern New Jersey

Take Route 1&9 or the Garden State Parkway to US 22 Westbound.

From Southern New Jersey

Take Parkway north to Exit 135 (Clark). Stay on left of ramp, follow circle under Parkway. Bear right to Central Avenue; follow to Westfield and under RR overpass. Left at light to North Avenue; follow to light in Fanwood. Right on Martine (which becomes Park Ave). Right on Bartle Ave in middle of shopping district. Scotch Plains Rescue Squad (2-story brick) is located on the right. Do not park in the row next to the building — you'll be towed.

From I-78 (either direction)

Take exit 41 (Scotch Plains); follow signs to US 22. Turn right at light at bottom of hill and use overpass to cross Rt. 22. Follow US 22 Westbound directions.

From US 22 Westbound

Exit at Park Avenue, Scotch Plains after McDonalds on the right, diagonally opposite Scotchwood Diner on the left, immediately before the overpass. After exiting, turn left at the light and use overpass to cross US 22. Bear right at bottom of ramp to continue south on Park Avenue. Turn left at the second light (a staggered intersection). Scotch Plains Rescue Squad (2-story brick) is on the right. Do not park in the row next to the building — you'll be towed. We meet on the second floor, entering by the door at the right front of the building.

From Western New Jersey

Take US 22 Eastbound to the Park Avenue exit. The exit is about a mile past Terrill Road and immediately past the overpass. Exit onto Park Avenue South and follow the directions above to the Rescue Squad building. ☺

Touchpad Pal

By Moe Norris, TPCUC Member (<http://topekacusersclub.org/>)

Laptop users of the world, UNITE!!! Enough of this jumping-bean cursor, already! You know the scenario – John Doe is busy typing away on his laptop when he notices that, even though he is striking keys, *no text is appearing on the lin**. Uh-oh, his thumb has accidentally brushed the touchpad, sending the cursor scooting off somewhere.

So he has to search the screen for the errant text, delete it, re-position the cursor, and then re-enter the text. It's exasperating the first time this happens, but it can happen again ... and again ... and again ... until poor John is ready to fling the laptop through the nearest window!

If this sounds like you, then you need the help of TouchPad Pal – a small, free utility that *turns off* the touchpad whenever you are entering text in a text editing program (e.g., Notepad, Wordpad, WordPerfect, MS Word, etc.).

After installing TouchPad Pal on your laptop (you can put a shortcut in the Startup menu and it will load each time you boot up), if you then inadvertently brush the touchpad while typing, the cursor stays where you intended for it to be.

A godsend! Try it. Who knows, you may discover that your high blood pressure is under control again! ☐

You can download TouchPad Pal (for free) from:

<http://tpp.desofto.com/>

The Computer Buffet

Herb Goldstein, Sarasota Personal Computer Users Group

ARP (ADD AND REMOVE PROGRAMS) PLUS PLUS is an advanced version of the Add and Remove Programs in Windows. It will allow you to uninstall programs which cannot be removed from (or may not even appear in) the Windows Add and Remove Programs. <http://users.csc.calpoly.edu>

SMILLAENLARGER. If you've ever tried to work with small images, like those generated by camera phones, you know how frustrating it can be to turn them into something printable. Most image editors just can't seem to manage it. SmillaEnlarger can help: The program takes even tiny icon-sized bitmap files and turns them into usable full-size images. <http://imageenlarger.sourceforge.net/>

SPECCY. What's in your computer? If you're like most of us, you can probably name the processor (Intel or AMD, Celeron or Pentium), maybe how much RAM it has, and maybe how big the hard drive is. If you want to know more, Speccy is a great system information tool for your PC. www.piriform.com ☐

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ACGNJ MEETINGS

For the very latest news on ACGNJ meetings visit the ACGNJ Web Page (<http://www.acgnj.org>)

Tuesday, March 1

7 P.M. - Board of Directors meeting.

Friday, March 4

8 P.M. - Main Meeting, Paul Syers (paul.syers@acgnj.org).

Monday, March 7

8 P.M. - Lunics, Andreas Meyer (lunics@acgnj.org)

Tuesday, March 8

7:30 P.M. - Java, Mike Redlich (mike@redlich.net)
908-246-0410.

Wednesday, March 9

7:30 P.M. - Mobile Devices, Brenda Bell (mobdevsig@acgnj.org)

Thursday, March 10

8 P.M. - Investing, Jim Cooper (jim@thecoopers.org).

Friday, March 11

6 P.M. to 5 A.M.- NJ Gamers. Gregg McCarthy (greggmc@optonline.net), 732-721-6507. Break 8 to 10 P.M.

Monday, March 14

8 P.M. - Layman's Forum, Matt Skoda (som359@aol.com),
908-359-8842.

Tuesday, March 15

7:30 P.M. - C/C++ Users, Bruce Arnold (barnold@ieee.org),
908-735-7898

Friday, March 18

8 P.M. - Window Pains, John Raff (john@jraff.com).

Monday, March 21

7 P.M. - Firefox Activity, David McRitchie (firefox@acgnj.org)

Thursday, March 24

8 P.M. - Hardware, Mike Reagan (hardware@acgnj.org)

Tuesday, March 29

7 P.M. - Board of Directors meeting.

Friday, April 1

8 P.M. - Main Meeting, Paul Syers (paul.syers@acgnj.org).

Monday, April 4

8 P.M. - Lunics, Andreas Meyer (lunics@acgnj.org)

Wednesday, April 13

7:30 P.M. -WebDev, (webdev@acgnj.org)
☐

All meetings, unless otherwise noted, are at Scotch Plains Rescue Squad, 1916 Bartle Ave., Scotch Plains, N.J.
Directions and map inside back cover.